

What is claimed is:

1. An optical pickup device including a condenser lens composed of a solid immersion lens having a spherical surface portion and a flat surface portion parallel to the surface of an optical recording medium, said condenser lens having a numerical aperture greater than 1, a bundle of rays in a predetermined polarized state being irradiated on said optical recording medium from a light source through said condenser lens and a polarized state component perpendicular to the polarized state of reflected light obtained when a distance between the surface of said optical recording medium and the flat surface portion of said solid immersion lens is zero is detected from reflected light from said optical recording medium to obtain a signal corresponding to the distance between the surface of said optical recording medium and the flat surface portion of said solid immersion lens, comprising:

a beam splitter for reflecting both of a p-polarized light component and an s-polarized light component in reflected lights from said optical recording medium;

dividing means for dividing incident light into the p-polarized light component and the s-polarized light component reflected by said beam splitter; and

photo-detecting means for separately detecting the p-polarized light component and the s-polarized light component separated by said dividing means.

2. An optical pickup device according to claim 1, wherein

said dividing means is a Wollaston prism.

3. An optical pickup device according to claim 1, wherein said dividing means is a Glan-Thompson prism.

4. An optical pickup device according to claim 1, wherein said dividing means is a polarizing and dividing grating.

5. A recording and reproducing apparatus for recording and/or reproducing an optical recording medium by using an optical pickup device including a condenser lens composed of a solid immersion lens having a spherical surface portion and a flat surface portion parallel to the surface of said optical recording medium, the condenser lens having a numerical aperture greater than 1, said optical pickup device comprising a beam splitter for reflecting both of a p-polarized light component and an s-polarized light component in reflected lights from said optical recording medium, dividing means for dividing the p-polarized light component and the s-polarized light component reflected by said beam splitter and photo-detecting means for separately detecting the p-polarized light component and the s-polarized light component divided by said dividing means, comprising:

drive means for adjusting a distance between said optical recording medium and said flat surface portion of said solid immersion lens; and

control means for controlling the adjustment state of said

drive means based upon a detected signal obtained when light intensity of one polarized component detected by said photo-detecting means is detected as a signal corresponding to the distance between the surface of said optical recording medium and the flat surface portion of said solid immersion lens.

6. A recording and reproducing apparatus according to claim 5, further comprising reproducing means for reproducing information from said optical recording medium based upon the other polarized light component detected by said photo-detecting means.

7. A gap detection method for detecting a gap between a flat surface portion of a solid immersion lens and an optical recording medium by an optical pickup device including a condenser lens composed of said solid immersion lens including a spherical surface portion and a flat surface portion parallel to the surface of said optical recording medium, the condenser lens having a numerical aperture greater than 1 when a bundle of rays in a predetermined polarized state is irradiated on the optical recording medium from a light source, comprising the steps of:

irradiating the optical recording medium with a bundle of rays in a predetermined polarized state through the condenser lens;

reflecting both of a p-polarized light component and an s-polarized light component of reflected lights of a bundle of rays after the recording medium has been irradiated with a bundle of

rays;

dividing the thus reflected p-polarized light component and s-polarized light component from each other; and

detecting a distance between the optical recording medium and the flat surface portion of the solid immersion lens based upon light intensity of any one polarized light component of the thus separated p-polarized light component and s-polarized light component.